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ABSTRACT

This monograph consists of a paper that examines the construct "disposition," and explores its relevance to curriculum and teaching practices in early childhood education, and a selected ERIC bibliography relating to this subject. The paper is organized in two parts. Part 1 provides a definition of disposition and definitions of the related terms "inclination," "cognitive style," and "learning style." The definition of disposition can be clarified by comparing the construct of disposition to other personal characteristics, namely: (1) traits, which are sometimes not distinguished from dispositions; (2) thought processes; (3) skills, which may exist without the disposition to use them; (4) attitudes, which are enduring organizations of beliefs; (5) habits, which are actions that are not the consequence of reflection; (6) the work inhibition of children who do not do work required of them despite their capability to do so; and (7) motives, which are considered to be more general than dispositions. Part 2 suggests seven reasons why the development of desirable dispositions should be included among the goals of early childhood education. The most important of these reasons is that the acquisition of knowledge and skills alone does not guarantee that children will use the knowledge and skills. A list of 47 references is provided. The bibliography that follows consists of 13 documents and 38 journal articles on dispositions, motivation, and praise that were selected from a search of the ERIC database. Each item in the bibliography contains bibliographic information and an abstract of the document or article. (BC)

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Perspectives from ERIC/EECE

Dispositions: Definitions and Implications for Early Childhood Practices

by Lilian G. Katz

ERIC Clearinghouse on Elementary Early Childhood Education

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Lilian G. Katz, Ph.D.

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Dispositions: Definitions and Implications for Early Childhood Practices

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Introduction

One of the major questions to be addressed when developing a curriculum is, What should be learned? I have suggested elsewhere (Katz, 1991) that one way to answer this question is to adopt at least four types of learning goals: knowledge, skills, dispositions, and feelings. The acquisition of both knowledge and skills is usually taken for granted as a goal for which educational institutions have a special, if not unique responsibility. That is not to say that knowledge and skills are not learned outside of schools. Families, museums, the media, libraries, sports clubs, and many other contexts are sources of voluntary as well as incidental knowledge and skill learning. However, schools and preschools are deliberately and explicitly designed to enhance knowledge and skill acquisition. Most educators would also readily agree that many feelings (e.g., self-esteem) are influenced—for better or worse—by school experiences and are worthy of inclusion among curriculum goals. However, *dispositions* are not usually listed among curriculum goals, though they are often implied by the inclusion of attitudes (e.g., toward learning) as goals. The main purpose of this paper is to examine the construct *disposition*, and with a working definition, explore its relevance to curriculum and teaching practices in early childhood education.

Examination of the place of dispositional learning in early childhood education is prompted by recent discussions of school readiness among professionals that have been stimulated by the promotion of the

National Educational Goals, recently renamed *Goals 2000: Educate America*. A case in point is the report of the Goal One Technical Planning Subgroup to the National Educational Goals Panel titled *Report on School Readiness*. The report includes "approaches to learning" as one of five dimensions of school readiness to be assessed in national samples of preschoolers (Goal One Technical Subgroup, 1991). Elaborating on the "approaches to learning" dimension, the Technical Planning Subgroup defines them as "the inclinations, dispositions, or styles—rather than skills—that reflect the myriad ways that children become involved in learning, and develop their inclinations to pursue it." With the subgroup's report as a point of departure, I begin with a discussion of definitional issues.

Part I. Definitional Issues

Approaches to learning

In the Technical Subgroup's report to the National Educational Goals Panel, the terms *inclinations, dispositions,* and *styles* are used as subcategories of the variable "approaches to learning." Examples of traits referred to by the three terms given in the report are "curiosity, creativity, independence, cooperativeness, and persistence." Though all three terms—inclinations, dispositions, and learning styles—may amplify our understanding of school readiness, they are imprecise. None of these three terms appears in the indexes of major comprehensive child development texts. (See, for example, Mussen, 1983; Sroufe, Cooper, and DeHart, 1992; Rathus, 1988; Yussen and Santrock, 1982; Bee, 1985; Scarr, Weinberg, and Levine, 1986.) How then are these terms to be defined?

Inclination

Webster's Dictionary defines *inclination* as a particular disposition of mind or character, liking or preference (*Webster's,* 1987). Listed as synonyms are: tendency, propensity, proclivity, and predilection (*The American College Dictionary,* 1948). Since *inclination* does not appear in the child development literature and its implications can be subsumed under the term *disposition,* it does not appear to be a useful term in considering curriculum and pedagogical issues.

Cognitive style

The term *cognitive style*, frequently used in research on adults and children, has been defined as "ways that individuals perceive, think, understand, remember, judge, and solve problems" (Saracho, 1991, p. 22), leaving no clear picture of what is not included in the definition. The research on cognitive styles typically assesses children's ways of thinking on a bipolar dimension of Field Dependence-Field Independence when approaching a variety of social and cognitive tasks and situations. Shipman (1989) summarizes research on the cognitive style construct as follows:

> Although cognitive styles represent important understandings of how learners respond to materials and communications, I believe that our understanding of the development, operation and malleability of cognitive styles is insufficient for justifying certain educational decisions (p. 3).

Learning style

The term *learning style* is increasingly linked to Howard Gardner's theory of multiple intelligences (Gardner, 1985), in which distinctive strength or weakness in one or another of seven hypothesized types of intelligence is associated with a corresponding learning style. Many educators are attempting to apply this formulation of learning styles in curriculum and teaching practices. Assessment of the usefulness of learning styles associated with the theory of multiple intelligences seems premature at this time. However, while learning styles and cognitive styles are being considered by educators, I suggest that they may serve as subcategories of the larger construct of dispositions.

Dispositions

Formal definitions of disposition

Though the term *disposition* is used in some of the psychology literature, definitions of it are rarely offered. To begin with formal definitions, the *Comprehensive Dictionary of Psychological and Psychoanalytical Terms* (English and English, 1958), offers the following definition of the term disposition:

> 2. a general term for any (hypothesized) organized and enduring part of the total psychological or psychophysiological organization in virtue of which a person is likely to respond to certain statable conditions with a certain kind of behavior: his *disposition* is to think before acting;... 4. a relatively lasting emotional attitude; or the relative predominance in the total personality of a certain emotional attitude; a stubborn disposition... 5. the sum of all innate tendencies or propensities... (p. 158; italics in the original).

In this part of the definition, the dictionary suggests that a disposition is a stable habit of mind and something called an "emotional attitude" with "stubbornness" as an example. The entry continues:

> Although all behavior depends upon a certain dynamic or propulsive readiness of the organism, as well as upon the stimulating conditions, **disposition** gives sharp emphasis to the former. The resulting behavior may then be described, to adapt a distinction made by B. F. Skinner, as **emitted** by the organism rather than **elicited** by the stimulus (p. 158; bold in the original).

This part of the definition suggests that a disposition is internal to the actor, and little influenced by the situation or stimuli to which the actor is subjected. The dictionary goes on to amplify the definition as follows:

> The construct of a *something to account for sameness of behavior despite variation in the environing situation* is a formal necessity. Thus it is necessarily and formally true that to enjoy a swim whether the water be hot or cold requires that the person have a certain disposition. But it need not be a specific enjoyment of swimming disposition. It may be a more general athleticism, or a relative indifference to temperature, or a combination of personal qualities each of which also plays its part in other situations. We cannot usually go directly from observed fact to a specific disposition to account for the fact. To constitute a useful construct, a disposition must be more

> general than the fact that led to its being inferred. The logical requirements for inference are not easily met (p. 158; italics in the original).

This last part of the formal definition suggests that the disposition construct is used to identify broad rather than specific categories of behavior, or characteristic ways of responding to a variety of situations.

Buss and Craik (1983, p. 105) propose a formal definition of dispositions as "summaries of act frequencies" that represent trends or frequencies of acts. According to this definition, a person exhibiting a relatively high frequency of behavior such as making donations to charity, giving gifts to family members, and offering loans to needy friends, could be said to have the disposition to be generous. Similarly, children who frequently ask questions, often snoop and pry, and generally poke around their environment can be said to have a robust disposition to be curious. However, Buss and Craik do not address the role of motivation or intentions associated with the act frequencies of which dispositions are constituted.

Katz and Raths (1985) applied the disposition construct to teacher education using the definition proposed by Buss and Craik, namely, as acts that may be conscious and deliberate or so habitual and "automatic" that they *seem* intuitive or spontaneous. Thus the disposition to be generous, illustrated in the previous paragraph, though consisting of intentional acts, is present when it is manifested with relatively little analysis or premeditation; if extensive analysis, premeditation, and reflection preceded each generous act, the disposition to be generous could not be inferred; rather the person might be described as having the disposition to be a cautious, deliberate, and perhaps grudging or reluctant donor.

Dispositions and other personal characteristics

The term disposition appears with increasing frequency in literature related to children's learning (e. g., Katz, 1985; Ennis, 1987; Resnick, 1987; Katz and Chard, 1989; Katz, 1990; Perkins, Jay, and Tishman, 1993; Langer, 1993). Katz and Raths (1985) attempt to clarify the disposition construct by distinguishing it from constructs of other personal characteristics such as traits, skills, attitudes, and habits. Further clarification may also be obtained by attempting to distinguish dispositions from other related constructs such as thought processes, motives, and work inhibition.

A) Traits and dispositions

The term *dispositions* appears in the literature on personality (e.g., Buss and Craik, 1983; Cantor, 1990; Hoffman and Tchir, 1990). In discussions of personality and its development, disposition is frequently used interchangeably with the term trait. For example, Maccoby (1987) uses the term disposition when she points out that

> most of us believe that other people are characterized by broad personality dispositions, such as aggressiveness, or conscientiousness, or sensitivity to the moods and needs of others—dispositions that manifest themselves in a variety of situations and with a variety of social partners (p. 5).

Later in the same text Maccoby speaks of behavioral dispositions, and still later, discussing the stability of behavior patterns, uses the term dispositions without a qualifier. No definitions of disposition are offered in the text; it appears to be employed as a synonym for trait and for stable and general characteristics usually associated with aspects of personality.

Wakefield (1989), combining the concepts of habit and motivation, and emphasizing intentionality, uses the term disposition in his definition of traits as

> stable dispositions to have certain kinds of beliefs, desires, and so on... (pp. 336-337)

> dispositions specifically of the intentional system... (p. 337)

Wakefield goes on to say the following:

> The trait explains specific motives in terms of a persistent and more general disposition of the intentional system to generate motives... (p. 338)

> A trait is a disposition to have a certain kind of intentional state, and the existence of such a disposition calls out for explanation in terms of underlying structures that account for this property of the intentional system (p. 338).

Wakefield asserts that "a proper explanation of behavior must make some reference to the specific meanings and experiences in the form of mental representations—generally known as *intentionality*—that cause an individual's behavior" (p. 333). In this way Wakefield uses the terms trait and disposition interchangeably and adds motivational and intentional components to their meaning. According to Wakefield's definition, curiosity, generosity, and stubbornness could be classified as dispositions, and would not include capabilities like mastery of reading, arithmetic, or handwriting skills.

Katz and Raths (1985) suggest that the terms trait and disposition differ in at least two major ways. The first is that a disposition implies a trend in a person's actions rather than his or her emotional state. Thus terms like honesty, ambition, and courage do not fit a definition of a disposition, but describe aspects of a person's character and the management of his or her emotions. Disposition, on the other hand, can be used to designate actions and characterize their frequency. An individual's dispositions can be implied by terms such as *explorer, problem solver, bully, whiner,* and so forth, which may however, be accompanied by emotional states.

The second way dispositions can be distinguished from traits is that of *intensity*. Katz and Raths explain this distinction as follows:

> When a man is asked, "Which way to the store?" and he responds with an accurate direction, few observers would attribute the trait of honesty to him on that basis alone. To merit the attribution of honesty as a trait, a person would have to be observed in the face of the temptation to lie, having to overcome some adversity and to behave with the level of intensity necessary to overcome it (Katz and Raths, 1985, p. 303).

B) Thought processes and dispositions

Resnick (1987) uses the term disposition in a discussion of "cultivating the disposition to higher order thinking" (p. 40) with the following definition:

> The term disposition should not be taken to imply a biological or inherited trait. As used here, it is more akin to a *habit* of thought, one that can be learned and, therefore, taught (p. 4; italics hers).

A related discussion is found in a text by Resnick and Klopfer (1989) in the chapter, "Shaping Dispositions for Thinking: The Role of Social Communities." In this discussion, the authors use the term disposition almost interchangeably with the word trait as illustrated in the following segment of their discussion:

> the social setting may help to shape a disposition to engage in thinking. There is not much research on how intellectual dispositions are socialized, but we do know how other traits such as aggressiveness, independence or gender identification develop. By analogy with these traits, we can expect intellectual dispositions to arise from long-term participation in social communities that establish expectations for certain kinds of behavior (Resnick and Klopfer, 1989, p. 9).

Perkins, Jay, and Tishman (1993), discussing new conceptions of thinking, define dispositions as "people's tendencies to put their capabilities into action" (p. 75). They offer as an example, research showing that "people can easily generate reasons on the side of an issue opposite their own when prompted to do so (they have the capability) yet generally tend not to do so (they lack the disposition)" (p. 75).

In a related discussion, Langer (1993) introduces the concept of mindfulness as distinctly different from attention and vigilance, and defines it as

> a state of mind that results from drawing novel distinctions, examining information from new perspectives, and being sensitive to context. It is an open, creative, probabilistic state of mind in which the individual might be led to finding differences among things thought similar, and similarities among things thought different. To be vigilant, in contrast, one has to have a particular stimulus in mind, and an expectation of what the stimulus is rather than what it could be. To pay attention is to pay attention to something; at the same time something else may go unnoticed (p. 44).

Langer suggests that activity that does not invoke active examination of information and sensitivity to context and so forth, is mindless, and she attributes the lack of such active examination to conventional formal instruction which emphasizes repetitive study and memorization.

Using Langer's definition of mindfulness, Perkins, Jay, and Tishman (1993) assert that

> Mindfulness can be considered a disposition because it has to do with how disposed people are to process information in an alert, flexible way (p. 75).

The applications of the construct of disposition cited above suggest that, though it is very difficult to define precisely, it offers a way of distinguishing capabilities and capacities from their manifestation.

C) Skills and dispositions

Katz and Raths (1985) suggest that one might have the various skills involved in being able to read, but be without the disposition to use them, i. e., without the disposition to be a reader. To state that a child *can* read is to imply that the child has achieved a certain level of mastery of the complex skills involved in reading. However, the term *disposition,* as implied by the Buss and Craik definition cited above, refers to the *frequency with which the act of reading is manifested,* in the absence of coercion or extrinsic rewards. When the act of reading is manifested frequently and voluntarily, it can be assumed that the child has in *mind,* at some level, an intention or goal that can be served by reading (given that the child has the requisite skills that make the manifestation possible). When the acts of reading are manifested frequently, it can be said that the child has a robust disposition to be a reader; when the acts are rarely or never observed, then it can be said that the child has a disposition which is weak, has been damaged, or has not been acquired.

D) Attitudes and dispositions

The term *attitude* has a long history of use among educators. In recent years, however, the meaning of the attitude construct has been the subject of substantial controversy (Fishbein, 1980; Eagly, 1992). It is usually defined as "a relatively enduring organization of beliefs around an object

or situation predisposing one to respond in some preferential manner" (Rokeach, 1968, p. 112) to a given phenomenon, or as "an evaluative tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly, 1992, p. 693). In this sense, attitudes can be thought of as *pre*-dispositions to act positively or negatively with respect to a particular phenomenon. According to this definition, it is possible to have an attitude toward something without accompanying behavior. However, the term *disposition*, according to Buss and Craik (1983), refers to frequently exhibited trends in actions. Thus one could have an attitude toward something in the absence of manifestations of related behavior. It is possible, for example, to have a negative attitude toward a race or nation without having opportunity or occasion to manifest it in actual behavior. In contrast to attitude, a disposition always implies trends in behavior and not merely an evaluation or cluster of beliefs about something.

Although the shaping of attitudes is often listed among the goals of educational programs (e. g., acquiring a positive attitude toward learning), the term *attitude* is not usually applied to *preschool* children, perhaps because they are assumed not to engage in evaluative thinking, but to respond momentarily in terms of largely spontaneous likes and dislikes, or to be somewhat *tabulae rasae* with respect to their larger environment.

E) Habits and dispositions

To describe a pattern of behavior as a habit is to assume that it is performed without conscious attention (Passmore, 1972). However, Katz and Raths (1985) suggest that dispositions are patterns of actions that require some attention to what is occurring in the context of the action, "although with practice and experience the acts may appear to be spontaneous, habitual, or even unconscious" (p. 303). The term *habit* should be used to refer to acts that are neither intentional nor the consequence of thought, reflection, and analysis. *Disposition*, on the other hand, is a term to be used to refer to trends in actions that are intentional on the part of the actor in a particular context and at particular times. Katz and Raths contrast habits and dispositions by suggesting that

> Inasmuch as intentionality is a mental process, we see dispositions as "habits of mind"—not as mindless habits. They are classes of intentional actions in categories of

> situations, and they can be thought of as "habits of mind" that give rise to the employment of skills and are manifested (ideally) by skillful behavior (p. 303).

F) Work inhibition and dispositions.

Bruns (1992) introduces the concept of *work inhibition* to address observations of very able children who do not do the work required of them in school, who "do not stay on task, do not complete class assignments, do not finish their homework on their own" (p. 38) even though they clearly have the requisite capacities. Bruns explains work inhibition in terms of three personality characteristics: dependency, self-esteem, and passive aggression. Dependency is shown in those children who sometimes exhibit work inhibition but who work very well "if their teacher is standing or sitting right next to them" (p. 40). Some express their poor self-esteem, sometimes through preoccupation with self-doubts, and sometimes with a kind of bravado in which they "declare that much of their school work is beneath them" (p. 41). As to the passive-aggression component of work inhibition, Bruns describes it as children's "subtle, indirect expressions of anger" (p. 41) accompanied by forgetting, arguing, and often taking a long time to complete their work.

According to Bruns, case histories of work-inhibited children reveal that work inhibition begins early and

> Although the manifestations of work inhibitions are not always apparent until the third or fourth grade (the time when the demand for independent academic work becomes substantial), the origins begin during infancy (p. 42).

However, Bruns does not report whether work-inhibited children overcome the inhibition when the tasks required of them appeal to their interests or challenge them more than most school tasks. Bruns' choice of the term inhibition may be interpreted to imply that if dependency and passive-aggression were removed and self-esteem raised, these children would exhibit effort and persistence.

I suggest that Bruns' concept of work inhibition may be more usefully categorized as a dispositional issue. By the time children reach the elementary school grades, reluctance to engage in assigned tasks may constitute instances of damaged or very much weakened dispositions to

learn, including the elements involved in persistence, effort, and mastery goals as discussed in the next section.

G) Motives and dispositions

McAdams (1989), citing Murray, suggests that human motivation can be understood in terms of

> a collection of psychogenic needs, each of which was viewed as an enduring underlying disposition which energizes, directs, and selects behavior, though always within an environmental context.

Emmons (1989) contrasts traits and motives, suggesting that

> traits [are] broadly defined as stylistic and habitual patterns of cognition, affect, and behavior. Motives can be defined as a disposition to be concerned with and to strive for a certain class of incentives or goals (p. 32).

In these examples, motivation is defined in terms of underlying dispositions; in this way, motives are thought to be more general than dispositions and are defined at higher levels of abstraction than dispositions.

School-age children. In a discussion entitled "Motivation to Learn and Understand: On Taking Charge of One's Own Learning," Anne Brown (1988) asks: "What is the relation between attitude and study? How stable are those dispositions?" (p. 312). Brown goes on to refer to effort in elementary and secondary school-age children as "motivational dispositions that influence learning" (p. 313) and to assert "that we will be hampered in our attempts to devise effective intervention programs unless we consider these dispositions" (p. 313).

Research on motivation related to dispositions comes under the rubric of mastery motivation (see, for example, Ames, 1992; Dweck, 1991; Dweck and Leggett, 1988; Corno, 1992). Several contrasts are offered by scholars studying this aspect of children's learning. For example, Dweck and Elliott distinguish between *mastery motivation* and *helplessness* to indicate that children of equal ability, when given feedback on their work

on a task may respond in one of two ways: "mastery-oriented children react as though they have been given useful feedback about learning and mastery," whereas the "helpless" children "react as though they have received an indictment of their ability" (Elliott and Dweck, 1988, p. 5).

Dweck (1989) also distinguishes between motivation toward *learning goals* (like mastery motivation) and *performance goals* that are governed by different sets of underlying concerns. Children oriented toward learning goals are interested in their own mastery for its own sake and those oriented toward performance goals are more concerned about others' judgments of their abilities. Learning-oriented children are more likely than performance-oriented children to believe that effort is effective, to vary their strategies in the face of difficulties, and to assist peers having difficulties.

In similar way, Nicholls (1984) makes a distinction between *task-involvement* and *ego-involvement* in children's approaches to their work. Task-involvement, similar to mastery motivation and the learning goal orientation, is characterized by effort directed toward the task and the learning it provides. Ego-involvement resembles the performance goal orientation in that it is associated with more concern for the judgments of others than for the task and the learning acquired by performing the task.

Ames, adopting the labels *mastery* and *performance goals*, integrates the research just described by distinguishing between achievement and mastery goals, suggesting that

> An *achievement goal* concerns the purposes of achievement behavior. It defines an integrated pattern of beliefs, attributions, and affect that produces the intentions of behavior and that is represented by different ways of approaching, engaging in, and responding to achievement activities (Ames, 1992, p. 261; italics hers).

> With a mastery goal, individuals are oriented toward developing new skills, trying to understand their work, improving their level of competence, or achieving a sense of mastery based on self-referenced standards. Compatible with this goal construct is...a "motivation to learn" whereby individuals are focused on mastering and understanding content and demonstrating a willingness to engage in the process of learning (Ames, 1992, p. 262.)

Ames states that a performance goal is a focus on one's ability and self-esteem based on comparing one's performance with others', "by surpassing normative-based standards, or by achieving success with little effort" (p. 262). Ames describes these contrasting motives as two forms of approach tendencies that are elicited by different environmental or instructional demands, and result in qualitatively different motivational patterns that can be called dispositions toward learning.

In a discussion of issues in the assessment of mastery motivation Linder (1990) points out that

> The examination of mastery motivation provides insight into the developmental domains upon which the child is focusing energy. The degree of persistence, approach to problem solving, and effectiveness of efforts in each developmental area can be determined... A reciprocal relationship...appears to exist between persistence and competence (Linder, 1990, p. 116).

While these motivational tendencies are evoked by the way tasks are presented to children, it seems reasonable to assume that a cumulative effect of repeated exposure to mastery-oriented teaching practices would be the development of a disposition toward mastery and to persevere that could also be called a disposition to learn.

Corno (1992) summarizes this body of research and its significance for successful participation in schooling as follows:

> Students who are generally inclined to approach school work from the point of learning and mastering the material (so-called learning/mastery orientations) tend to differ in work styles from students whose goals or intentions generally lead from the other point, that is, to obtain grades or display competence. Specifically, "learning-oriented" students (a) engage in more attentive behavior, (b) use deeper learning and studying strategies (put in more quantity and quality of effort), and (c) feel better about themselves as learners. A "performance/ego orientation" has been linked to less elaborate efforts to learn the material and feelings of inadequacy about learning (p. 71).

Preschool children. The development and nature of motives in preschool children is highly problematic and cannot be fully addressed in this paper. The references to motivation in very young children in the *Handbook of Child Psychology* (Mussen, 1983) are related to the internalization of extrinsic rewards (see Harter, 1983) and the young child's "motivation to control his or her own behavior in order to please the significant others in his or her life, to garner their approval and avoid their disapproval" (Harter, 1983, p. 364). While observers of young children readily agree that young children are invariably curious and eager to learn, they do not speak of children's curiosity and eagerness to learn as motives in the same way as when speaking of achievement motives in older children.

Dweck (1991) reports research on four- and five-year-old children on variables such as task persistence-nonpersistence and demonstrates that the mastery and helpless orientations that are significantly related to school achievement can be observed in preschoolers. She points out that

> it appears that the helpless pattern occurs point for point in an appreciable proportion of young children. These children show a marked lack of persistence in the face of failure, as well as a strong tendency (a) to express spontaneous negative thoughts and affect when they encounter obstacles, (b) to see difficulty as meaning they are incapable of performing a task (as opposed to seeing difficulty as surmountable through effort), and (c) to exhibit low expectancies of success on similar future tasks. (Dweck, 1991, pp. 219-220).

Based on the research on motivation currently available, it is difficult to formulate a clear distinction between motives and dispositions. (See also Appley, 1991.) It seems useful for educators to assume that mastery motivation, which could be called a general *disposition to learn,* is most likely present in some form at birth in all normal infants. Its manifestation is likely to change with development, to be related to the child's experience, and to be increasingly varied and differentiated with increasing age and experience. It may be manifested (a) in the newborn as an "orienting response," (b) in the toddler as various types of exploration, play, and experimentation, (c) in the preschooler as a disposition to make sense of experience, and (d) at school age in ways such as those described in the accounts by Dweck and Corno cited above.

Summary and tentative definition

In sum, usage of the term disposition is ambiguous and inconsistent. Only one attempt to define the construct psychologically has been found, namely that by Buss and Craik (1983) as act frequencies constituting trends in behavior. Nevertheless, educators and most likely other observers as well, recognize that it is possible to have skills and lack a taste for, wish to, or habit of using them. To speak of using and applying knowledge, however, is more problematic. We do not usually speak of using or applying knowledge in the same way as we speak of associating reading skills with the disposition to read, or listening skills with the disposition to listen. Elements of knowledge are usually associated with mental processes such as inference, recall, memory, classification, and construction, though there is a sense in which we describe people as analytical to mean that they have the disposition to process information analytically rather than holistically or impulsively.

A variety of personal attributes including traits, attitudes, habits, work inhibition, and motives, are used to describe trends in behavior across situations, in an attempt to distinguish these from knowledge, abilities, capabilities, and skills.

As far as can be determined, the term *disposition* and its relevance to the education of young children were first introduced by Katz (1985) in "Dispositions in Early Childhood Education," in which dispositions were defined—as proposed above—to be "relatively enduring habits of mind or characteristic ways of responding to experience across types of situations" (p. 1). Examples of such habits or characteristics are curiosity, humor, creativity, affability, and quarrelsomeness.

On the basis of an examination of the uses of the term in recent psychological and educational literature, I propose that the term disposition can be used to distinguish trends in behavior from skills, attitudes, traits, and mindless habits (e.g., fastening one's seat belt), and that these distinctions have useful practical implications even in the absence of desirable precision. For the purposes of exploring these implications, the following tentative definition is proposed:

> A disposition is a pattern of behavior exhibited frequently and in the absence of coercion, and constituting a habit of mind under some conscious and voluntary control, and that is intentional and oriented to broad goals.

The term "habit of mind" is used to distinguish dispositions from mindless and unpremeditated habitual behavior like obeying traffic lights and fastening seat belts. Both such habits can be thought to have some motivational and intentional dimensions in an ultimate sense. However, they are such strong and frequent habits of action that they are typically enacted with little or no conscious engagement of motives or intentions. These habits, however, may be relatively trivial and commonplace acts that are part of a general disposition to be obedient, law-abiding, or cautious.

In the case of curiosity, for example, a child can be said to have the disposition to be curious if he or she typically and frequently responds to the environment by exploring, examining, and asking questions about it. Similarly, the disposition to complain or whine would be robust if exhibited frequently, and weak if rarely. Both are examples of dispositions in that they can be assumed to be intentional and mindfully directed toward particular objects and situations in order to achieve goals. It should be emphasized that not all dispositions are desirable, and curriculum and teaching practices must address how undesirable ones can be weakened.

Part II. The Implications of Dispositions for Early Childhood Education Practices

There are at least seven reasons for suggesting that dispositions should be included among the goals (each of which should be stated in terms of strengthening desirable and weakening undesirable dispositions) of early childhood education. The most important reason is that the acquisition of knowledge and skills alone does not guarantee that they will be used and applied. As Cantor (1990) puts it, "having" is not necessarily "doing." For example, it is likely that most children have the capacity to listen, usually referred to as listening skills, but they may or may not have the disposition to be listeners. Similarly, there is some suggestion in the research on social development that children with social difficulties often have the skills required for competent peer relationships, but do not employ them with sufficient strength or frequency. Since skills are likely to be improved with use, teaching strategies should take into account ways that the dispositions associated with them can be strengthened.

Second, dispositional considerations are important because the instructional processes by which some knowledge and skills are acquired

may themselves damage or undermine the disposition to use them. For example, one risk of early formal instruction in reading skills is that the amount of drill and practice required for successful reading of the English language at an early age may undermine children's dispositions to be readers (Katz, 1992). It is clearly not useful for a child to learn skills if, in the processes of acquiring them, the disposition to use them is damaged. On the other hand, having the disposition to be a reader (if such a disposition were possible), for example, without the requisite skills would also not be desirable. Thus the acquisition of reading skills and the disposition to be a reader should be mutually inclusive goals of education.

Third, some important dispositions relevant to education, such as the disposition to investigate, may be thought of as inborn. When children's experiences support the manifestations of a disposition with appropriate scaffolding (see Rogoff, Gauvain, and Ellis, 1990) and environmental conditions, it is likely to become robust and without such supportive experiences it is likely to weaken if not extinguish. Though knowledge and skills not acquired early in life might be acquired later, dispositions are probably less amenable to reacquisition once damaged or extinguished.

Fourth, the processes of selecting curriculum and teaching strategies should include considerations of how desirable dispositions can be strengthened and undesirable dispositions can be weakened. In the case of desirable dispositions, it seems reasonable to assume they are strengthened when opportunity to manifest them is available, and vice versa for undesirable ones. For example, if the disposition to investigate is accepted as worthy of strengthening, then a curriculum and appropriate teaching strategies must be designed accordingly. If the disposition to accept peers of diverse backgrounds is to be strengthened, then similarly, opportunity to manifest such acceptance must be available.

Fifth, on the basis of the evidence accumulated from research on mastery versus performance motivation, it seems reasonable to suggest that there is an optimum amount of positive feedback for young children above which children may become preoccupied with their performance and the judgments of others rather than involvement in the task, and hence their learning would be acquired at the expense of their disposition to learn. What constitutes an optimum level is likely to vary widely in any group of children, and must be determined by close observations of their reactions to adult feedback.

Sixth, if we agree that dispositions are sufficiently important aspects of children's development and education to be among the goals, then they must be included in the evaluation and assessment of an educational program. Inclusion of dispositions as goals requires determination of which dispositions to include and how their manifestation can be assessed.

Seventh, dispositions are not likely to be acquired through didactic processes, but are more likely modeled by young children as they experience being around people who exhibit them. Therefore, teachers and parents might consider what dispositions can be seen in them by the children they are responsible for. If teachers want their young pupils to have robust dispositions to investigate, hypothesize, experiment, conjecture, and so forth, they might consider making their own such intellectual dispositions more visible to the children. In many years of observations in preschool programs, I have yet to observe a teacher say something like "I've been wondering whether this is the best time to do so-and-so. What do you think?" or, "I'm not sure if this is the best place to put this [piece of equipment]. Anybody got any ideas?" or, "When I thought about your question, I thought that the answer might be X or Y. It would be interesting to find out what the answer is," or "I haven't thought about [X] that way before," and so forth. The list of potential ways that teachers of young children could exhibit the intellectual dispositions to be strengthened and supported in the early years is potentially very long and deserves serious attention in the course of curriculum planning and teacher education.

Conclusion

It seems reasonable to assume that dispositions are always more or less influenced by experiences in preschool programs, whether by intention or by default. Much research is needed to determine which dispositions merit attention, and whether dispositions of a general or specific focus should be addressed by educational goals. If the desirable dispositions listed among the goals are very specific, the list is likely to become unmanageably long. For example, to associate reading skills with the disposition to a reader, and listening skills with the disposition to be a listener, then we may end up with a list of dispositions as long as any list of specific skills! However, if dispositional goals are too general, they become too difficult to observe and therefore to assess. Ideally, educational goals should

include dispositions that strike an optimal balance between generality and specificity.

In the interim, while questions of which dispositions are desirable and dispositions of what level of specificity should be included in goals are addressed, it seems timely to include dispositions among important outcomes of education at every level. By placing dispositions in the list of educational goals we are likely to pay more deliberate attention to ways in which desirable ones can be strengthened, and undesirable ones can be weakened. For the moment I suggest that the most important disposition to be listed in educational goals is the disposition to go on learning. Any educational approach that undermines that disposition is miseducation.

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A Selected ERIC Bibliography on Dispositions, Motivation, and Praise

The items listed in this bibliography were retrieved from a search of the ERIC database. Documents and journal articles are listed in order from the most recently to the least recently added to the database.

ERIC Documents

ED351370
Wolfe, Edward W.; Linden, Kathryn W. 1991. **Investigation of the Relationship between Intrinsic Motivation and Musical Creativity**. 21p. EDRS Price - MF01/PC01 Plus Postage.

The purposes of this study were to: (1) investigate the feasibility of including convergent, divergent, and imaginary factors in models of creative thinking in music; (2) identify the relationship between the processes involved in musical creativity and motivation for musical activities; and (3) determine the generalizability of Amabile's Intrinsic Motivation Principle for Creativity to settings involving musical creativity. Forty third graders who exhibited a high level of convergent ability in music were administered the Intermediate Measures of Music Audiation-Rhythm (IMMA-R), Measures of Creative Thinking in Music (MCTM), and Sounds and Images (SI). These children were also given free time to play music on percussion instruments or to play with other toys. The amount of time a child engaged in music-making activities was designated as the Intrinsic Motivation Level (IML) for musical activities. IML scores were significantly related to MCTM scores and all subscales of the MCTM. All MCTM subscale scores were significantly correlated. T-tests revealed that highly motivated children performed better on divergent thinking tasks than did children exhibiting low motivation levels. Finally, SI scores were found to be significantly higher for boys than for girls. Three tables present study findings, and two appendixes present definitions of components of musical creativity and IML rating guidelines.

ED348668

Anderson, Stephen A.; And Others. 1992. **A Mastery Learning Experiment.** Yale, MI: Yale Public Schools. 36p. EDRS Price - MF01/PC02 Plus Postage.

Yale Public Schools (Yale, Michigan) conducted a field experiment in implementing mastery learning. The purpose of the experiment was to provide a hands-on experience for teachers in the implementation of mastery learning and to use students as their own controls in order to compare the results of the implementation of mastery learning both in terms of cognitive and affective student outcomes. Six classrooms were used in the sample for the experiment which included grades 3 through 6 plus a 5th/6th split grade and a special education resource room class, for a total of six teachers and 94 students. A series of six hour-long inservice classes were held to acquaint teachers with mastery learning. All six teachers chose mathematics as the content area for implementation. Test results compared the unit test scores in the fall of 1991 with the test results after implementation of two mastery learning units in the spring of 1992. Students were also assessed for any change in their feelings of self-efficacy using Brookover's Self-Concept of Ability Survey. Significant gains in achievement were found for both mastery learning units and self-efficacy. (Three tables and three figures of data are included; 20 references, verbatim reports of each of the six teachers on the implementation of the mastery learning units, the self-concept of ability scale, and the proposal for mastery learning experimentation are attached.)

ED348447
Mac Iver, Douglas J. 1992. **Motivating Disadvantaged Early Adolescents To Reach New Heights: Effective Evaluation, Reward, and Recognition Structures.** Baltimore, MD: Center for Research on Effective Schooling for Disadvantaged Students, Baltimore. 29p. EDRS Price - MF01/PC02 Plus Postage.

The Incentives for Improvement Program is an alternative student evaluation and recognition system that is responsive (all students have a realistic chance to achieve success) and challenging (students are not likely to succeed consistently unless they work up to their potential). The program's goals are to raise student performance and foster students' motivation to learn. An evaluation was conducted to determine whether the program accomplished its goals during its first year of implementation.

Volunteer teachers from four Baltimore City (Maryland) middle schools participated in the program during the 1989-90 school year. The program's effectiveness in raising students' grades, probability of passing, intrinsic interest in their schoolwork, effort, and self-concept of ability was evaluated by comparing end-of-school-year outcomes for students in participating classes with those of similar students who were enrolled in the same courses at four other Baltimore City middle schools. To make these comparisons as precise as possible, pre-test adjusted outcome measures in hierarchical linear models were used. The results illustrate the substantial positive impact of individualized, improvement-oriented reward and recognition structures on students' grades in participating courses and on their probability of passing these courses. There was also a small positive effect of the program on students' self-reported levels of effort. The program provides an evaluative process in which educationally disadvantaged students share increased opportunities to experience success in a challenging curriculum by earning recognition for academic improvement and by building upon this improvement to earn better grades and higher passing rates. Teachers' expectations that students will succeed academically are a vital part of motivating and effectively teaching currently low-achieving students. Included are 25 references, 3 tables, 4 figures, and an appendix providing selected questionnaire items used to measure students' perceptions.

ED313108
Hitz, Randy; Driscoll, Amy. 1989. **Praise in the Classroom**. ERIC Digest. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education. 3p. EDRS Price - MF01/PC01 Plus Postage.

Research suggests that: (1) teachers' use of praise may lower students' confidence in themselves; (2) systematic use of praise as a reinforcer in the classroom is impractical; (3) praise is a weak reinforcer; (4) various forms of praise have different effects on different kinds of students; and (5) use of praise is not the most powerful method for controlling deviant behavior and maintaining student attention. However, research also indicates that there are effective ways to praise students. The term "effective praise," or "encouragement," refers to a teacher's use of positive acknowledgments that neither judge student work nor assign status to the student. Encouragement offers specific, teacher-initiated, and private feedback that focuses on improvement and efforts, uses sincere and direct comments,

helps students appreciate their behaviors and achievements, avoids comparisons with others, helps children develop self-satisfaction from a task or product, and does not set the student up for failure. It is concluded that teachers who avoid ineffective praise and use encouragement create a classroom environment in which students do not fear continuous evaluation, can make and learn from mistakes, and do not need to strive to meet someone else's standard of excellence. Nine references are cited.

ED344198
Whitney, Patricia. 1991. **Children's Locus of Control and Intrinsically Motivated Reading**. 36p.; Paper presented at the Annual Meeting of the National Reading Conference (41st, Palm Springs, CA, December 3-7, 1991). EDRS Price - MF01/PC02 Plus Postage.

A study investigated the relationship between locus of control and intrinsically motivated reading for children. The entire sixth grade, totalling 53 students, of a parochial school in San Francisco was administered the Children's Nowicki-Strickland Internal-External Control Scale. A free-choice paperback reading rack provided the measure for intrinsically motivated reading. To test the hypothesis that students with an internal locus of control would be more productive readers than those with an external locus of control, a matched sample was drawn. The t-test for matched samples and the Pearson product-moment both indicated non-significant differences between intrinsic motivation of internal and external subjects. The most revealing factor was that the students felt they were "too busy" for free-choice reading. (Three figures and two tables of data are included; 23 references are attached.)

ED343667
McLean, Deborah L. 1992. **Cooperative Learning: Theory to Practice in the Young Child's Classroom**. 11p. EDRS Price - MF01/PC01 Plus Postage.

This paper discusses cooperative learning as a teaching method that uses intrinsic rewards, or rewards that come from within a student, in the education of young children. The developmental perspective of cooperative learning, which suggests that peer interaction, without the use of extrinsic rewards, leads to intellectual and social growth, is based on the theories of

Vygotsky and Piaget. This perspective is supported by a growing body of evidence indicating that extrinsic rewards are detrimental to creative functioning. To foster cooperative learning, teachers can: (1) present children with developmentally appropriate activities; (2) encourage social interaction; (3) have children work with peers of mixed abilities; (4) develop activities which provide children with hands-on experience; (5) involve children in the learning process; and (6) provide interesting and open-ended activities. Teachers can follow these seven guidelines by using a project approach to learning in the classroom. The project approach capitalizes on children's differing abilities, revolves around a theme, and allows for an open-ended learning process. The benefits of cooperative learning include stressing cooperation over competition, developing social skills, and providing opportunities for the handicapped child to make a contribution to the group. A list of 14 references is provided.

ED342088
Hadderman, Margaret. 1992. **Cooperative Learning in Elementary Schools**. Eugene, OR: ERIC Clearinghouse on Educational Management. National Association of Elementary School Principals, Alexandria, VA. Research Roundup, 8(2). 5p. EDRS Price - MF01/PC01 Plus Postage.

Cooperative learning is being recommended as a solution for numerous education problems, from enhancing disadvantaged children's self-esteem to ensuring academic success for all students. Cooperative learning has great potential as a supplement or alternative to traditional teaching methods when students are adequately socialized and motivated. The teacher's role is crucial, since conventional workbook exercises are usually inadequate and students must be led to assume responsibility for their own learning and deportment. This "Roundup" summarizes cooperative learning research studies by four major contributors. Robert Slavin's comprehensive review article, stressing group goals and individual accountability, links the use of Student Team Learning and Group Investigation models to student gains in achievement, intergroup relations, and self-esteem. David Johnson and Roger Johnson's meta-analysis shows the superiority of cooperative learning strategies in promoting student achievement and identifies factors influencing group success or failure. Elizabeth Cohen's article argues that cooperative learning's survival depends on developing new curriculum materials, addressing student status problems, and creating collegial and

administrative support systems for teachers. Daniel Solomon's study of cooperative learning in a longitudinal Child Development Project shows that K-4 students in three program schools exhibited more socially responsive behavior and concern for democratic values that their peers in control schools.

ED335144
Gottfried, Adele E.; Gottfried, Allen W. 1991. **Parents' Reward Strategies and Children's Academic Intrinsic Motivation and School Performance**. 13p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991). EDRS Price - MF01/PC01 Plus Postage.

This study investigated the relationship between parents' reward strategies for children's school performance and children's intrinsic academic motivation, achievement, and classroom functioning. Nine-year-olds (N=107) were given tests that measured motivation and achievement (the Children's Academic Intrinsic Motivation Inventory and the Woodcock-Johnson Tests of Achievement). Mothers completed a survey concerning reward strategies they used when their children did well or poorly in school tasks. Teachers completed the teacher's version of the Achenbach Child Behavior Checklist. Reward strategies emphasizing children's competence were positively related to motivation. Children who received more praise showed higher achievement. Reward strategies emphasizing extrinsic rewards or devaluation of competence were negatively related to motivation and achievement. These strategies were also associated with more school behavior problems and less effective learning. A list of seven references is included.

ED333987
Early, Diane; Barrett, Marty. 1991. **Predicting Learned Helplessness and Achievement: The Role of Locus on Control and Motivational Orientation**. 9p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991). EDRS Price - MF01/PC01 Plus Postage.

This 2-year study examined the relative potency of locus of control (LOC)

and motivational orientation (MO) as predictors of standardized achievement scores and learned helplessness. Also tested was the prediction that children with an extrinsic MO would be prone to adopt an external LOC over time. In the first year of the study, subjects were 158 fifth-graders; in the second year, subjects were 70 of the first-year participants. It was thought that MO should predict children's helplessness and achievement more accurately than LOC, because MO, taking into account a child's sense of control over reasons for initiating task engagement and regulating task strategies, is a more global construct than LOC, which focuses on the child's perceived internal sense of control over the outcome of the achievement situation. It was assumed that adopting an extrinsic orientation, which predisposes children to helplessness, ultimately produces an external LOC. Hypotheses were tested using self-report measures of MO, LOC, and visual discrimination problems with a failure manipulation to test for helplessness. Standardized test scores were used as an indicator of achievement. Data supported the hypotheses. The intrinsic motivation perspective better predicted achievement and helplessness than did the LOC perspective. Extrinsically motivated children were more prone to develop external loci of control than were those intrinsically motivated. Results are discussed in terms of theoretical and practical implications for researchers and educators.

ED326817
Solomon, Daniel; And Others. 1990. **Cooperative Learning, Intragroup Dynamics, and Student Outcomes**. 16p.; Paper presented at the Annual Meeting of the American Psychological Association (98th, Boston, MA, August 10-14, 1990). EDRS Price - MF01/PC01 Plus Postage.

This study examined relationships between students' cooperative learning experiences (including both the frequency and quality of their interactions in small groups) and their attitudes toward school; perceptions of the classroom environment; intrinsic motivation; and various social attitudes, skills, and values. Participants (n=756) were teachers and students from 35 third- through sixth-grade classrooms at six elementary schools in three school districts located in the San Francisco Bay (California) area. Small group interaction; student attitudes toward school; student perceptions of the classroom environment; student attitudes and beliefs about learning and cooperative learning; student social attitudes, skills and values; peer

relations; social adjustment; self-esteem; intrinsic motivation; and academic achievement were measured through a variety of methods and questionnaires. The findings revealed that students in all classes in all three districts had at least some experience with small group learning, and that the effects of cooperative learning on students' academic and social development were a function of the quality of the group interaction. These results demonstrate the importance of directly examining interaction processes within groups to improve understanding of the effects of cooperative learning, as well as to help to ensure that cooperative learning is used effectively in classrooms.

ED312057
Dweck, Carol S.; Henderson, Valanne L. 1989. **Theories of Intelligence: Background and Measures**. 18p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Kansas City, MO, April 27-30, 1989). EDRS Price - MF01/PC01 Plus Postage.

Research on implicit beliefs or theories about intelligence has shown that those with entity theories tend to be oriented toward performance goals--that is, toward documenting their intelligence, while those with incremental theories tend to be oriented toward learning goals--that is, toward developing their intelligence. This paper discusses measures used to assess individuals' theories, confidence, and goal orientation. Appendices provide: (1) an intelligence belief measure suitable for children 10 years of age and older; (2) three confidence measures: one suitable for children 9-12 years of age, and two suitable for children of 12 years and older; and (3) a goal orientation measure. Concluding remarks express the hope that the measures will prove to be useful to other researchers.

ED291493
Kowalski, Patricia; And Others. 1987. **The Relationship between Teachers' Ratings and Students' Self-Reported Motivation**. 13p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, DC, April 20-24, 1987). EDRS Price - MF01/PC01 Plus Postage.

Reported are data from the initial use of the Motivation Checklist, a rating

scale for teachers designed to help them think about student motivation problems in terms of an extended, research-based typology. Over 50 teachers rated 261 students in grades one through six who differed in their level of motivation and in their level of achievement. Teachers also rated students' achievement in terms of percentile rank in the class. Factor analyses revealed that the instrument basically failed in its original goal of getting teachers to differentiate motivational problems. Apparently teachers used the Motivation Checklist in a way that confirmed researchers' initial impressions that teachers simply categorized students as either good or bad. Students' scores on subscales were inspected to investigate the relationship between teachers' perceptions of student motivation and students' perceptions of why they do their schoolwork. Two 5th-grade teachers used the checklist to rate 56 students in typical performance-oriented mathematics classes. Students completed Harter's Perceived Scholastic Competence Scale, Buhrmester's School Concerns Scale, and a new motivation scale developed by Harter which allows assessment of several sources of intrinsic and extrinsic motivation. Findings indicated that students whom teachers thought of as good claimed they worked to escape parental disapproval, while students thought of as bad claimed that when they worked, they did so because they found the task interesting. Results are discussed and the checklist and its subscales are appended.

ED283604
Leggett, Ellen L.; Dweck, Carol S. 1987. **Children's Effort/Ability Reasoning: Individual Differences and Motivational Consequences**. 13p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (Baltimore, MD, April 23-26, 1987). EDRS Price - MF01/PC01 Plus Postage.

Individual differences in same-aged children's reasoning about effort and ability, as well as the consequences of different forms of reasoning in actual achievement situations, were investigated. It was hypothesized that different forms of children's reasoning would be related to different (helpless versus mastery-oriented) motivational patterns. Research documented the existence of two distinct and essentially opposite forms of reasoning in young adolescents. One form, typically linked to developmental maturity, assumes that effort and ability are inversely related and asserts that effort discredits ability. The other form, typically ascribed to younger children, assumes a positive relationship between

effort and ability and asserts that effort utilizes ability. In two studies, 13- and 14-year-old adolescents' form of reasoning was a significant predictor of their motivational pattern, but "mature" reasoning led to the helpless pattern, whereas "immature" reasoning led to the mastery-oriented pattern. Results suggest that effort-ability reasoning may best be understood by considering both developmental and individual differences.

Journal Articles

EJ452403
Fantuzzo, John W.; And Others. 1992. **Effects of Reciprocal Peer Tutoring on Mathematics and School Adjustment: A Component Analysis**. Journal of Educational Psychology, 84(3), 331-39.

The relative impact of structured peer learning and group reward components of a reciprocal peer tutoring intervention on mathematics performance of 64 academically at-risk students in grades 4 and 5 was examined. Results indicate additive and distinctive effects of both components, with the highest gain for the component combination.

EJ452395
Ames, Carole. 1992. **Classrooms: Goals, Structures, and Student Motivation**. Journal of Educational Psychology, 84(3), 261-71.

The classroom learning environment is examined in relation to achievement goal theory of motivation. A perspective is presented that argues for identification and analysis of classroom structures that can contribute to a mastery orientation. With such an orientation, the focus will be on effort rather than ability.

EJ451484
Biemiller, Andrew; Meichenbaum, Donald. 1992. **The Nature and Nurture of the Self-Directed Learner**. Educational Leadership, 50(2), 75-80.

One source of differences between the highest and lowest achieving children is the degree of self-regulated learning that occurs. High achievers engage in goal setting, planning, questioning, and other behaviors. By

observing how children approach tasks and resisting the urge to "think for" less self-directed learners, teachers can help each student attain mastery and expertise.

EJ448596
Baer, Ruth A.; And Others. 1992. **Effects of Self- vs. Experimenter-Selection of Rewards on Classroom Behavior in Young Children**. Education and Treatment of Children, 15(1), 1-14.

A study involving two children, ages two to three found that experimenter-selection of rewards was a more effective procedure for modifying behavior than was self-selection, though a study of four first graders indicated no significant differences between self-selection and experimenter-selection of rewards.

EJ447161
Maehr, Martin; And Others. 1992. **School Leader as Motivator**. Educational Administration Quarterly, 28(3), 410-29.

Describes a collaborative effort between a university and leadership teams from one elementary school and one middle school to change the schools' learning environment to increase the emphasis on student task mastery and decrease the emphasis on student ability.

EJ446648
Meloth, Michael S.; Deering, Paul D. 1992. **Effects of Two Cooperative Conditions on Peer-Group Discussions, Reading Comprehension, and Metacognition**. Contemporary Educational Psychology, 17(2), 175-93.

Task-related talk, reading comprehension, and metacognition of 219 third grade students were examined over a 4-week period in classrooms assigned to reward (encouragement through team recognition) or strategy (discussions directed toward task content) conditions. The role of task related talk and efficacy of focusing strategies are discussed.

EJ442340

Clifford, Margaret M.; Chou, Fen-Chang. 1991. **Effects of Payoff and Task Context on Academic Risk Taking**. Journal of Educational Psychology, 83(4), 499-507.

Fourth grade Taiwan students (94 males and 97 females) completed 2 cognitive risk-taking tasks with variable payoff or fixed payoff in a game or test context. Both variable payoff and game context increased the level of academic risk taking. Results are discussed concerning interactions between ability and risk taking.

EJ438662
Boggiano, Ann K.; And Others. 1991. **Mastery Motivation in Boys and Girls: The Role of Intrinsic versus Extrinsic Motivation**. Sex Roles: A Journal of Research, 25(9-10), 511-20.

Two studies with 277 intermediate grade students (106 males, 107 females, and 64 males and females) show that motivational orientations, measured by the scale of S. Harter (1981), are not distributed similarly across gender but that girls are more likely to be extrinsically motivated and influenced by adult feedback.

EJ438661
Boggiano, Ann K.; Barrett, Marty. 1991. **Strategies to Motivate Helpless and Mastery-Oriented Children: The Effect of Gender-Based Expectancies**. Sex Roles: A Journal of Research, 25(9-10), 487-510.

Five studies, involving 70 male, 133 female, and 6 unknown adults, examine potential determinants of gender differences in helplessness of children by investigating 2 steps in the expectancy confirmation process: gender-based expectations, and proposed differential treatment for inadequate academic performance based on gender.

EJ436879
Newby, Timothy J. 1991. **Classroom Motivation: Strategies of First-Year Teachers**. Journal of Educational Psychology, 83(2), 195-200.

Motivational strategies used by 30 first year elementary school teachers

and on-task behaviors of their respective students were monitored. Each teacher used several motivating strategies (concerning getting attention, emphasizing relevance, building confidence, and imposing rewards and punishments). There was a significant positive correlation between relevance strategies and on-task behaviors.

EJ436789
Jacobs, Heidi Hayes. 1991. **The Integrated Curriculum**. Instructor, 101(2), 22-23.

Discusses the advantages of an interdisciplinary curriculum, especially in elementary school. Implementing interdisciplinary curriculum units helps children acquire targeted concepts and skills of various disciplines more effectively. Existing curriculum, current events, and student concerns are the places to find interdisciplinary unit ideas.

EJ436711
Wheldall, Kevin; Panagopoulou-Stamatelatou, Anthi. 1991. **The Effects of Pupil Self-Recording of On-Task Behavior on Primary School Children**. British Educational Research Journal, 17(2), 113-27.

Reports findings of two studies of the effects of pupil self-recording of on-task behavior. Finds evidence for the effectiveness of self-recording in improving on-task behavior levels. Finds positive effects on academic productivity in multiple baseline study. Concludes self-control skills may promote independent learning behavior allowing children to alter their own behavior.

EJ435493
Matthews, Doris B. 1991. **The Effects of School Environment of Intrinsic Motivation of Middle-School Children**. Journal of Humanistic Education and Development, 30(1), 30-36.

Compared motivation of eighth grade students in traditional and non-traditional (nongraded, self-selection) schools. Results showed higher levels of intrinsic motivation in academic learning for students from humanistic school setting than for boys and girls from a more structured environment.

EJ431182
Guskey, Thomas R.; And Others. 1991. **The Thorpe Gordon School: A Model for Improvement**. Principal, 71(1), 36-38.

As a Missouri school's experience shows, mastery learning and cooperative learning can produce more positive results when applied together than when used separately. An agenda for success depends on a strong mission statement, parent involvement, and teacher teams to develop corrective and enrichment activities.

EJ430936
Fantuzzo, John W.; And Others. 1991. **Teachers' Use and Children's Preferences of Rewards in Elementary School**. Psychology in the Schools, 28(2), 175-81.

Examined teacher reports of reward use and students' preferences for rewards across elementary school grades. Findings revealed high reward use by teachers. Children reported a wide variety of reward preferences, with no significant gender or age differences found. There was no clear relationship between teacher use and children's preferences.

EJ429514
Marchant, Gregory J. 1991. **A Profile of Motivation, Self-Perception, and Achievement in Black Urban Elementary Students**. Urban Review, 23(2), 83-99.

Explores the relationship between intrinsic motivation and self-perceptions and academic achievement and attendance in 47 Black elementary school students. Suggests that some Black urban elementary students may find improving their standard English vocabulary and preferring challenging work to be socially undesirable. Implications for urban schools are presented.

EJ427840
Mevarech, Zemira R. 1991. **Learning Mathematics in Different Mastery Environments**. Journal of Educational Research, 84(4), 225-31.

Study examined the ways 117 low-socioeconomic third graders interacted during acquisition of new mathematical skills. The effects of cooperative-mastery-learning (CML) strategies on their mathematics achievement were investigated. Two experiments indicated that students exposed to CML performed better than those given more traditional instruction.

EJ420441
Atkinson, Ann H.; Green, Virginia P. 1990. **Cooperative Learning: The Teacher's Role**. Childhood Education, 67(1), 8-11.

Maintains that a teacher's awareness of the ways in which task organization, learner contributions, the reward system, and the teacher's orientation can foster cooperative peer interaction, and therefore shared learning. Determines how well children use cooperative peer interaction to increase their learning.

EJ415900
Soto, Lourdes Diaz. 1989. **Relationship between Home Environment and Intrinsic versus Extrinsic Orientation of Higher Achieving and Lower Achieving Puerto Rican Children**. Educational Research Quarterly, 13(1), 22-36 .

Differences and relationships between home environment and motivational orientation were examined for 28 higher and 29 lower achieving mainland Puerto Rican children in grades 5 and 6. Post-hoc multiple regression analysis revealed that family involvement accounted for a significant amount of variance with regard to achievement.

EJ409149
Nelson-Le Gall, Sharon; Jones, Elaine. 1990. **Cognitive-Motivational Influences on the Task-Related Help-Seeking Behavior of Black Children**. Child Development, 61(2), 581-89. Thematic Issue on Minority Children

Examines the relation between children's mastery motivation, self-assessment of performance, and task-related, help-seeking behavior during task performance.

EJ402390
Kozlovsky, Joan D. 1990. **Integrating Thinking Skills and Mastery Learning in Baltimore County**. Educational Leadership, 47(5), 6.

Describes Baltimore County (Maryland) Public Schools' integration of a mastery learning project for third and fourth graders begun in 1980 with a subsequent thinking skills project. The basic premises of each program (that students will learn well, given time and appropriate instruction) were similar. A sidebar illustrates the divergent questioning model.

EJ392542
Butler, Ruth. 1990. **Interest in the Task and Interest in Peers' Work in Competitive and Noncompetitive Conditions: A Developmental Study**. Child Development, 60(3) 562-70.

Tested the hypothesis that focusing attention on relative performance will promote ego involvement and undermine intrinsic motivation in school-age children but not in preschoolers without a normative conception of ability.

EJ388054
Ames, Carole; Archer, Jennifer. 1988. **Achievement Goals in the Classroom: Students' Learning Strategies and Motivation Processes**. Journal of Educational Psychology, 80(3), 260-67.

A study involving 176 secondary school students was undertaken to determine how specific motivational processes are related to the salience of mastery and performance goals in classroom settings. Findings suggest that classroom goal orientation may facilitate maintenance of adaptive motivation patterns when students adopt salient mastery goals.

EJ387129
Ellis, T. R. 1989. **Good Teachers Don't Worry about Discipline**. Principal, 68(4), 16-18,20.

The most effective teachers have the fewest discipline problems. Principals should heed proponents of effective teaching and mastery learning. When learning is meaningful, motivation is provided, teaching is appropriate, and behavior problems seldom occur.

EJ386538
Dweck, Carol S.; Leggett, Ellen L. 1988. **A Social-Cognitive Approach to Motivation and Personality**. Psychological Review, 95(2), 256-73.

A research-based model is presented that accounts for major patterns of adaptive and maladaptive behavior in terms of underlying psychological processes. It is postulated that as individuals' self-attributes are translated into allied goals, these goals generate corresponding behavior patterns.

EJ380489
Butler, Ruth. 1988. **Enhancing and Undermining Intrinsic Motivation: The Effects of Task-Involving and Ego-Involving Evaluation on Interest and Performance**. British Journal of Educational Psychology, 58(1), 1-14.

Describes study of fifth and sixth grade Jewish Israeli students that tested the hypothesis that intrinsic motivation will be differentially affected by task-involving and ego-involving evaluation. Three feedback conditions involving grades and individual comments are explained, and results are discussed in terms of student interest and performance.

EJ360271
Dweck, Carol S. 1986. **Motivational Processes Affecting Learning**. American Psychologist, 41(10), 1040-8. Special issue on Psychological Science and Education.

Educationally relevant conceptions of motivation are difficult to establish. A research based model of motivational processes can show how goals for cognitive tasks shape reactions to success and failure and how they influence the quality of cognitive performance. This model can aid in designing programs to change maladaptive motivational processes.

EJ347766
Benenson, Joyce F.; Dweck, Carol S. 1986. **The Development of Trait Explanations and Self-Evaluations in the Academic and Social Domains**. Child Development, 57(5), 1179-87.

Subjects of this study were 144 White, middle-class children in kindergarten, first, second, and fourth grades. Children were interviewed individually about their explanations for both academic and social outcomes and their evaluations of their own outcomes. Self-evaluations became less positive in both domains and less similar across domains with increasing grade level.

EJ343164
Green, Lena; Foster, Don. 1986. **Classroom Intrinsic Motivation: Effects of Scholastic Level, Teacher Orientation, and Gender**. Journal of Educational Research, v80 n1 p34-39 Sep-Oct

A study investigated the effect of scholastic level, teacher orientation on a control/autonomy continuum, and pupil gender on 459 elementary school students' intrinsic motivation to engage in school work. Results indicated that teacher orientation toward autonomy enhanced the intrinsic motivation of girls on two of three dimensions, and that of boys on one dimension.

EJ336917
Butler, Ruth; Nisan, Mordecai. 1986. **Effects of No Feedback, Task-Related Comments, and Grades on Intrinsic Motivation and Performance**. Journal of Educational Psychology, 78(3), 210-16.

A study tested the hypothesis that intrinsic motivation would be maintained after receipt of nonthreatening, task-related evaluation and undermined after repeated non-receipt of feedback or receipt of controlling normative grades. Results confirmed the hypothesis and revealed significant group differences in intrinsic motivation as reflected in performance and attitudes.

EJ336859
Fuchs, Lynn S.; And Others. 1986. **Effects of Mastery Learning Procedures on Student Achievement**. Journal of Educational Research, 79(5), 286-91.

This study of high- and low-achieving first graders assessed the effect of two mastery learning treatments on reading performance. Results are presented, and implications are discussed.

EJ308837
Licht, Barbara G.; Dweck, Carol S. 1984. **Determinants of Academic Achievement: The Interaction of Children's Achievement Orientations with Skill Area**. Developmental Psychology, 20(4), 628-36.

Examines the degree to which experiencing confusion during the acquisition of new academic material differentially affects classroom performance of helpless and mastery- oriented fifth-graders. Provides an initial test of a theoretical approach to understanding differences between male and female performances in different subject areas.

EJ308832
Dalenberg, Constance J.; And Others. 1984. **A Reexamination of Developmental Changes in Causal Attributions**. Developmental Psychology, 20(4), 575-83.

Examines kindergarten, second-, and fourth-grade children's use of the presence or absence of extrinsic rewards to make inferences about the intrinsic motivation of another person. Results are discussed in terms of parameters of the attributional effects, the possible mechanism responsible for the phenomena, and significance for other developmental research using self-report techniques.

EJ307224
Ames, Carole; Ames, Russell. 1984. **Goal Structures and Motivation**. Elementary School Journal, 85(1), 39-52.

Examines motivational processes within different goal/reward structures, i.e., competitive, cooperative, and individualistic. Reviews the results of several studies of teacher and student perceptions of personal ability and success and failure. Discusses educational implications of the authors' conclusion that alternative goal structures lead to different types of motivation.

EJ306048
Ames, Carole; Ames, Russell. 1984. **Systems of Student and Teacher Motivation: Toward a Qualitative Definition**. Journal of Educational Psychology, 76(4), 535-56.

Three systems of motivation (ability-evaluative, task mastery, and moral responsibility) and their implicit value orientations shared by students and teachers are defined. This qualitative perspective relates to distinct cognition networks, involving goals and values, attributions, and strategy beliefs. Student motivation and teacher motivation are characterized.

EJ306022
Ames, Carole. 1984. **Achievement Attributions and Self-Instructions Under Competitive and Individualistic Goal Structures**. Journal of Educational Psychology, 76(3), 478-87. (The research reported in this article was supported by a University of Maryland General Research Board Award.)

Fifth and sixth graders performed at a high or low level on a novel achievement task within a competitive or individual goal structure. The type and frequency of children's thoughts were assessed. Children made more ability attributions in the competitive condition and more effort attributions in the individual condition.

EJ288582
Gottfried, Adele Eskeles. 1983. **Research in Review. Intrinsic Motivation in Young Children**. Young Children, 39(1), 64-73.

Reviews theories and research findings on intrinsic motivation for young children and suggests ways for parents and educators to facilitate children's development in this area.

EJ274893
Pallak, Suzanne R.; And Others. 1982. **School Experience, Reward Characteristics, and Intrinsic Motivation**. Child Development, 53(5), 1382-91.

Suggests that, according to a study of children's responses to verbal and symbolic rewards, the nature of prior experience with rewards and reward contingency may affect the relative salience of information and controlling properties, thereby enhancing or undermining intrinsic motivation.

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